

**REMARKS**

**I. Rejections under 35 U.S.C. § 102(e)**

The Examiner has rejected claims 1-3, 5, 7-9 and 11-17 under 35 U.S.C. § 102(e) as allegedly being anticipated by U.S. Patent No. 6,233,601 to Walsh (“Walsh”)

**A. Claim 1**

Applicant submits that claim 1 is patentable over the cited reference. For example, claim 1 recites, “a server; a portable device; and wherein a mobile agent and a place code are transferred between said server and said portable device, said place code used to implement, on a side of said portable device, an environment in which said mobile agent is able to be executed; wherein said server has a configuration so as to transfer said place code to said portable device when said server transfers said mobile agent to said portable device; and wherein said portable device has a configuration so as to implement, on a side of said portable device and based on said place code transferred from said server, an environment in which said mobile agent transferred from said server is able to be executed.”

In regard to the above, Applicant provides the following comments. The mobile agent is software that moves among places (computers or portable devices) linked by networks and performs calculation processing or a like at a place (computer) to which the software has moved (Page 3, lines 5-8, present Application). A mobile agent is made up of an identifier used to uniquely identify the mobile agent in an entire system, an execution code (internal state) saving portion used to save intermediate results from the calculation processing performed by the mobile agent and an execution code (program code) required to run the mobile agent (Page 3, lines 13-18, present Application; Fig. 26). Thus, the mobile agent has a feature in that it is

capable of proceeding (suspending and resuming) calculation processing, moving from one computer/ portable device to another computer/ portable device.

Furthermore, the place code is an execution program having functions to receive and transmit the mobile agent, and to have the mobile agent start, terminate, suspend and resume an execution of a program, and for calculation processing (page 21, lines 13-17, present Application). The conventional mobile agent can move only to a computer/portable device, provided that the computer/portable device has a "place" that can receive the mobile agent and that can provide an environment allowing the mobile agent to run (page 3, lines 8-11, present Application).

The Examiner maintains that Walsh discloses the claimed features. For example, in regard to the claimed feature of a mobile agent being transferred between a server and a portable device, the Examiner cites to column 3, lines 20-30 of Walsh. As set forth therein, an agent 10 travels from a first computer 12 to a second computer 14. Thus, the first computer 12 of Walsh is alleged to disclose the claimed server and the second computer 14 is alleged to disclose the claimed portable device. Furthermore, in regard to the claimed place code, the Examiner refers to column 4, lines 11-17, 25-28 and 64-66 of Walsh.

Applicant respectfully traverses the Examiner's assertion. The agent manager 30,32 of Walsh discloses a type of "place code." Applicant submits, however, that each of the agent managers 30,32 are already provided in the computers 12 and 14 in advance. Thus, the agent managers 30,32 are not actually transferred from a server. On the other hand, as recited in claim 1, not only is the mobile agent transferred, but also a place code is transferred from a server to a portable device.

Furthermore, Walsh teaches procedures for serializing, transmitting and reserializing an agent as follows (columns 3-5, Fig. 5). First, a serialized agent is transmitted via a network from a first computer to a second computer, and arrives at the second computer (step 38). The serialized agent is then deserialized from the network form to a runnable form by assistance of Java/Object Serialization upon arrival (step 40). The agent is then executed (step 50). The agent manager 30 establishes a network connection to the other agent manager 32 at the next destination, i.e., a third computer 14 (step 60). The agent is serialized to a next form (step 62). The agent manager 30 passes the agent and related travel information to the next destination agent manager 32 (step 64). Applicant submits that Walsh neither discloses nor suggests that the "place code" which is a platform on which an agent is able to execute, is transmitted with the agent via the network not only from a computer to the destination computer, but also from a server to a portable device.

In conclusion, Walsh discloses a mobile agent transfer system comprising: a server and a portable device; wherein a mobile agent is transferred between the server and the portable device. Applicant submits, however, that Walsh fails to disclose a server that has a configuration so as to transfer, to the portable device, a place code used to implement, on a side of the portable device, an environment in which the mobile agent is able to be executed when the mobile agent is transferred from the server to the portable device, and that the portable device has a configuration so as to implement, on a side of the portable device and based on the place code transferred from the server, an environment in which the mobile agent able be executed, as set forth in claim 1.

At least based on the foregoing, Applicant submits that claim 1 is patentable over the cited reference.

**B. Claim 2**

Applicant submits that claim 2 is patentable at least by virtue of its dependency.

In addition, the Examiner apparently contends that the "ClassLoader" of Walsh, which is taught as allowing "the executable code for mobile agents to travel with the agent" anticipates all the features of dependent claim 2, which further defines the place code of claim 1 (See Office Action at page 3 and Walsh at col. 5, lines 55 - col. 6, line 25).

Applicant respectfully traverses the Examiner's assertion. For example, as described above, the place code has functions to receive and transmit the mobile agent, and to have the mobile agent start, terminate, suspend and resume an execution of a program or calculation processing. On the other hand, a ClassLoader merely provides a function of importing/loading Java class files. The ClassLoader is not equivalent to the "place code" of the present invention since the ClassLoader has no functions to receive and transmit the mobile agent, and to have the mobile agent start, terminate, suspend and resume an execution of a program or calculation processing. For example, the function of creating a new thread for agent execution (step 42), the function of a checkpoint agent to store before execution (step 44), the function of indicating an agent method in an invoked itinerary (step 46), the function of establishing a network connection to the other agent manager 32 at the next destination (step 60), serializing an agent to a network form (step 62), and of passing the agent to the next agent manager (step 64) are not provided by the ClassLoader. Rather, as disclosed in Walsh such functions are provided by the agent manager 30, 32 and a server 74 (Walsh, Figs. 4 and 7). In Walsh, the ClassLoader is merely used to deserialize a serialized agent from the network form to a runnable form by assistance of Java/Object Serialization upon arrival (step 40).

For at least the above reasons, Applicant submits that claim 2 is patentable over the cited reference.

**C. Claims 3, 7, 8, 9 and 14-17**

Since claims 3, 7, 8, 9 and 14-17 contain features that are analogous to the features recited in claim 1, Applicant submits that such claims are patentable for at least analogous reasons as claim 1.

**D. Claims 5 and 11**

Applicant submits that claims 5 and 11 are patentable at least by virtue of their dependency.

In addition, claim 5 recites, “wherein said server has a movement number managing section used to create and manage a movement number required to ignore messages other than a message that has first arrived when a plurality of messages each having same contents to transfer a mobile agent has reached said agent receiving section from said agent transmitting section in said mobile communicating device due to a failure of a network.”

The Examiner refers to column 4, lines 25-46 of Walsh as disclosing the above features. There is, however, absolutely no teaching or suggestion of a movement number required to ignore messages other than a message that first arrived, as set forth in claims 5 and 11. Rather, the cited portion of Walsh discusses a home codebase and a reference pointer.

In regard to the rejection of claim 11, which recites analogous features as recited in claim 5, the Examiner refers to a different portion of Walsh. In particular, the Examiner refers to column 5, lines 49-55 of Walsh as disclosing the claimed features. The cited portion of Walsh discloses that in order for migration and execution to function properly, ClassLoader is used to modify the rules that Java follows to load classes. There is, however, no discussion as to the

claimed features of a movement number managing section used to create and manage a movement number required to ignore messages other than a message that has first arrived when a plurality of messages each having the same contents to transfer a mobile agent has reached the agent receiving section from the agent transmitting section in said mobile communicating device due to a failure of a network. Accordingly, Applicant submits that claims 5 and 11 are patentable over the cited reference.

If the rejection of claims 5 and 11 are to be maintained, Applicant respectfully requests that the Examiner address the specific features underlined above.

## **II. Rejections under 35 U.S.C. § 103(a) in view of Walsh and U.S. Patent No. 6,532,543 to Smith ("Smith")**

The Examiner has rejected claims 4, 6 and 10 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Walsh in view of Smith. Since Smith fails to cure the deficient teachings of Walsh at least, in regard to claims 3 and 9, Applicant submits that claims 4, 6 and 10 are patentable at least by virtue of their dependency.

## **III. Conclusion**

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.


The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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